

SERVICE MANUAL

MODELS 57X11 & 57X12



57X11 - Walnut

57X12 - Ivory

GENERAL INFORMATION

TYPE - 5 tube AC-DC table model superheterodyne with self-contained loop antenna.

TUNING RANGE - 535 to 1620 Kc.

TUBE COMPLEMENT - 12SA7 Oscillator-Modulator
12SK7 IF Amplifier
12SQ7 Detector, AVC & 1st AF Amplifier
50L6GT Power Amplifier
35Z5GT Rectifier

POWER SUPPLY - Operates from 117 Volts AC or DC, 30 watts

INSTALLATION & OPERATING INSTRUCTIONS

POWER SWITCH AND VOLUME CONTROL. The power switch and volume control are combined and operated with the volume knob. Turn radio ON by rotating volume knob to the right until a click is heard. Continued rotation of this control to the right will increase volume. Turn receiver OFF by rotating volume knob to the left until a click is heard.

NOTE: If the receiver does not operate from a direct current (DC) line after being turned ON for a few minutes, reverse the line cord plug in the wall outlet.

TUNING. The calibrated dial scale is read in kilocycles by adding one "0" to the figures. Tune carefully until you are exactly on the station; tuning to either side of it will result in noisy reception and poor tone quality. Do not regulate volume by

detuning the station; always tune exactly on the station, then adjust volume control to desired loudness.

ANTENNA. A loop antenna is built into this receiver eliminating the need for an external antenna. Reception from some stations may be improved by rotating the whole receiver; this is due to the slight directional characteristic of the loop antenna. In extremely noisy locations, rotate the entire receiver till minimum noise and maximum signal pickup are obtained. For additional pickup, an external antenna may be connected to the screw connector on back of set.

CAUTION: Never connect antenna or chassis to water pipe, radiator or other ground.

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ALIGNMENT

Maximum performance can only be obtained if extreme care is exercised during alignment. Follow the procedure carefully.

A low range output meter should be connected across the speaker voice coil. Set receiver volume control to maximum; for greatest accuracy keep output of receiver at approximately .05 watt throughout alignment by reducing generator output (not receiver volume control) as stages are brought into alignment. (.05 watt = .40 volt on output meter). The alignment tool should be of an insulated type such

as Motorola Part Number 66A71008.

If receiver is operated from AC line during alignment, it is suggested that an isolating transformer be used between receiver and power line. If no isolation transformer is used and hum is encountered during alignment, connect the ground side of the signal generator to B- instead of the receiver chassis.

Refer to Figure 1 for location of all adjustments.

STEP	DIAL SET TO	DUMMY	SIGNAL GENERATOR CONNECTED TO	SIGNAL GENERATOR SET TO	ADJUST TRIMMER OR CORE	REMARKS
IF ALIGNMENT						
1.	Gang fully opened	.1 mf.	Osc-Mod grid *	455 Kc	1,2,3 & 4	Adjust for maximum
RF ALIGNMENT						
2.	1600 Kc **	-	Radiation loop ***	1600 Kc	5	This sets osc. to dial scale
3.	1400 Kc	-	Radiation loop ***	1400 Kc	6	Tune signal for max. with receiver tuning knob, then peak trimmer 6.

* A convenient point is the stator of the antenna section of the tuning capacitor.

** Close gang fully and set pointer to calibration mark at left hand side of dial background; then set pointer to 1600 Kc by turning tuning knob till pointer lines up with right hand calibration mark.

*** Connect output of signal generator to a 5" diameter, 3 turn loop and bring loop close enough to receiver loop to obtain output of 50 milliwatts (.40V) on output meter. Vary distance between loops to maintain this output during alignment. Minimum distance between loops should never be less than 12".

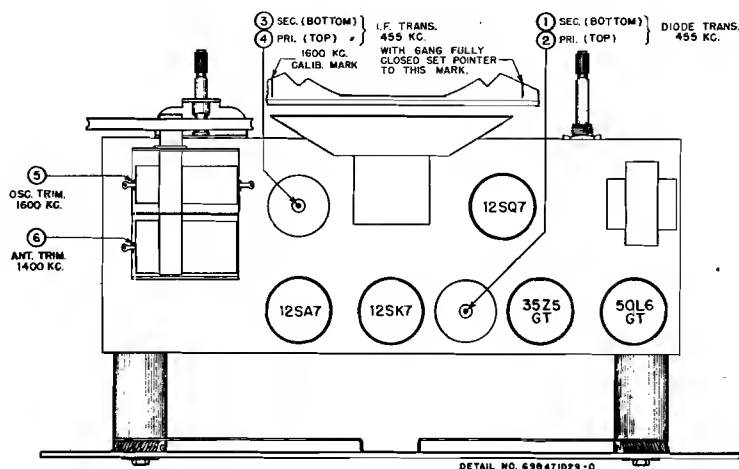


FIGURE 1. TUBE AND TRIMMER LOCATIONS

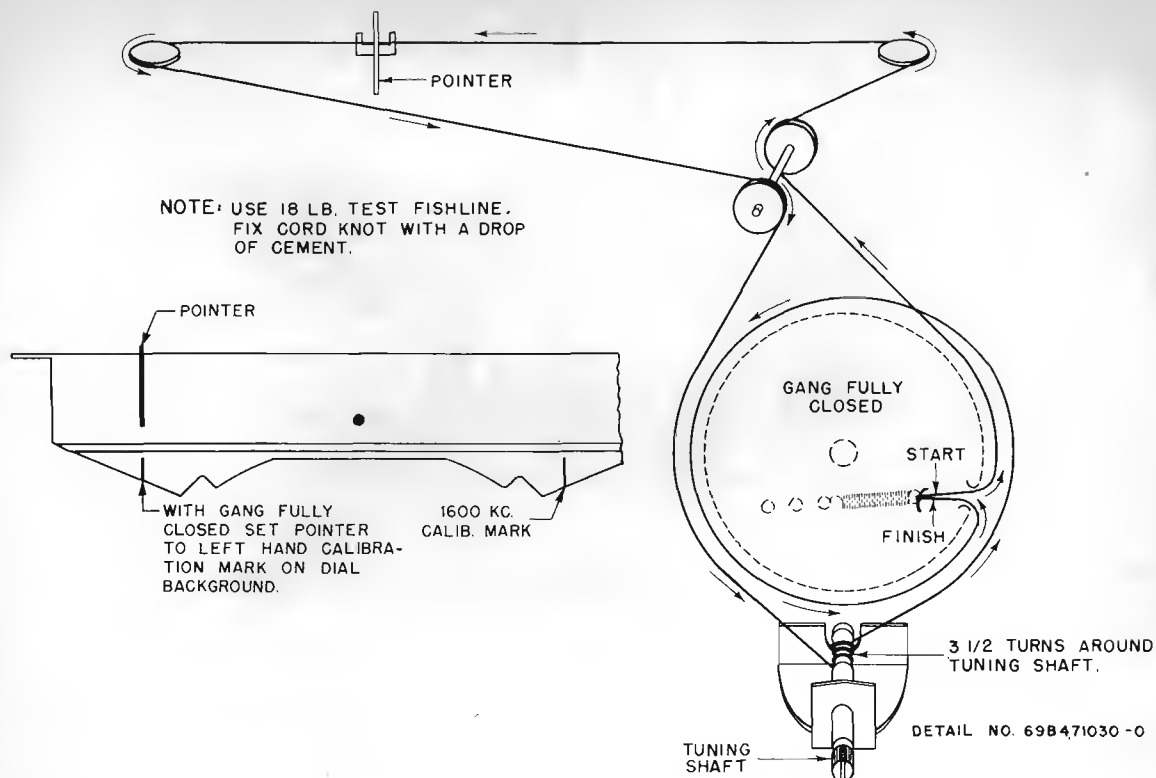


FIGURE 2. STRING DRIVE DETAIL

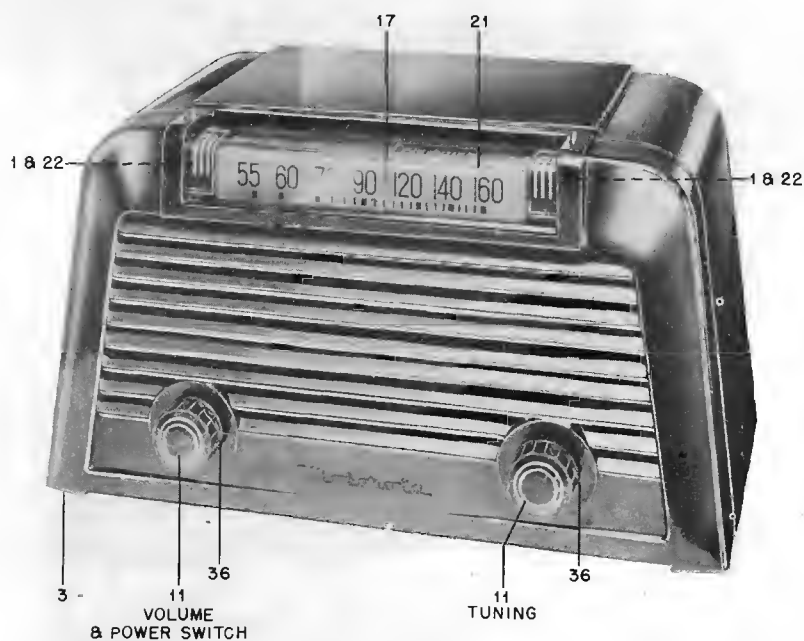


FIGURE 3. PARTS LOCATION - CABINET VIEW

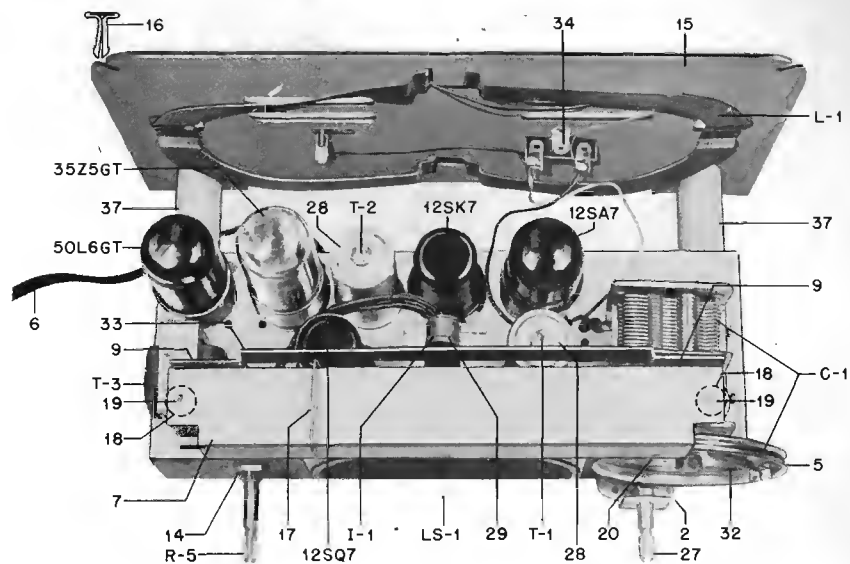


FIGURE 4. PARTS LOCATION - CHASSIS TOP

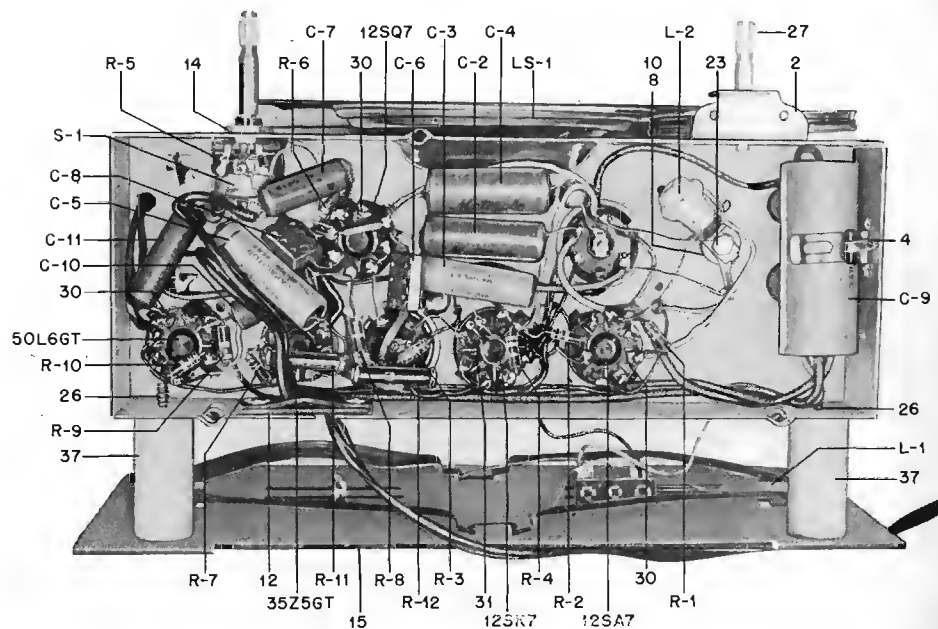
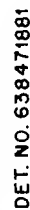


FIGURE 5. PARTS LOCATION - CHASSIS BOTTOM



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REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	LIST PRICE	REF. NO.	PART NO.	DESCRIPTION	LIST PRICE
CAPACITORS							
C-1	1X77204	Variable: 2 gang; cut oscillator plates; includes pulley.....	3.90	SWITCH			
C-2	8S9806	Paper: .1 mf 200V .....	.25	S-1		Switch (part of volume control R-5)	
C-3	8S9816	Paper: .05 mf 400V .....	.20	TRANSFORMERS			
C-4	8A72666	Paper: .15 mf 200V .....	.25	T-1	24B70531	IF: 455 Kc; complete with iron cores and padding capacitors, but less shield	1.70
C-5	6S9816	Paper: .05 mf 400V .....	.20	T-2	24B70533	Diode: 455 Kc; complete with iron cores and padding capacitors, but less shield	1.70
C-6	21R6640	Mica: 250 mmf 500V .....	.25	T-3	25B76117	Output	1.50
C-7	6S9813	Paper: .005 mf 600V .....	.20				
C-8	21R6648	Mica: 250 mmf 500V .....	.25				
C-9	23B75808	Electrolytic: 40-20-20 mf 150V	1.15				
C-10	8S9813	Paper: .005 mf 600V .....	.20				
C-11	8S9802	Paper: .02 mf 400V .....	.20				
DIAL LIGHT							
I-1	65X11854	Bulb, pilot: 6.3V, .15A; tubular, bayonet base; #47 .....	.15	1	7A77382	Bracket, dial scale mounting .....	.05
COILS							
L-1	24K77096	Loop Winding only - less cabinet back ...	.65	2	7A14684	Bracket, tuning shaft .....	.10
L-2	24A74616	Oscillator .....	.85	3	16S77220	Cabinet, table model: plastic; walnut finish (57X11)	-
RESISTORS							
NOTE: All resistors are insulated carbon type, ± 20% unless otherwise specified.							
R-1	6R6026	22,000 1/2 W	1.00	4	16K77221	Cabinet, table model: plastic; ivory finish (57X12)	-
R-2	6R6015	220,000 1/2 W	1.00	5	42K75826	Clip, electrolytic mounting .....	.40
R-3	6R6004	1 meg 1/2 W	1.00	6	11M8944	Cord, dial: 18 lb. black .....	.10
R-4	6R2085	39 10% 1/2 W	1.00	7	30A151	Cord, line: 6 ft. long; with plug .....	.75
R-5	18A70032	Volume control: 1 meg; includes switch S-1	1.00		1X77209	Dial Background Bracket & Pulleys Assembly: background bracket with 4 cord pulleys .....	.50
R-6	6R2122	4.7 meg 1/2 W	1.00	8	5A19658	Eyelet, spacer: 19/64 x .212 I.D. x 1/2 (gang mtg) .....	.20
R-7	6R5883	27 10% 1/2 W	1.00	9	5S7805	Eyelet, snap-in; steel (dial background strip mtg) .....	.15
R-8	6R6015	220,000 1/2 W	1.00	10	5A70404	Grommet, rubber (gang cushions) .....	.60
R-9	6R6032	470,000 1/2 W	1.00	11	36B77213	Knob, control; plastic; walnut finish (57X11) .....	.15
R-10	6R6373	150 10% 1/2 W	1.00	12	36K77214	Knob, control: plastic; ivory finish (57X12) .....	.15
R-11	6R6152	220 1W N.I. ....ea	.15	13	32A24815	Lock, line cord: fibre .....	.25
R-12	6R3972	1,200 10% 1W N.I. ....ea	1.45	14	2A70075	Nut, speed: Tinnerman #520 (dial background bracket mtg) .....	.15
				15	2S7051	Nut, steel: 3/8 x 9/16 hex; cadmium plated (volume control mtg) .....	.15
SPEAKER							
LS-1	50B76109	Speaker: 4" Ft; 3.2 ohms V.C. Exchange	3.30	16	1X77210	Panel Assembly, cabinet back: less loop winding .....	.50
				17	36A25507	Plug, split: 5/8" long (loop panel to cabinet mtg) .....	.15
					52A77069	Pointer, dial .....	.20

REF. NO.	PART NO.	DESCRIPTION	LIST PRICE	REF. NO.	PART NO.	DESCRIPTION	LIST PRICE
18	49A21552	Pulley, cord: 1/2" groove (.....doz	.30	29	9A77086	Socket, pilot light: with bracket and leads.....	.35
19	5A15045	Rivet, shoulder: 7/16" long; nickel plated (cord pulley mtg) .....doz	.15	30	9A6790	Socket, tube: molded octal; plain type ..	.15
20	5A71735	Rivet, shoulder: 1/2" long; nickel plated (cord pulley mtg) .....doz	.35		9A6788	Socket, tube (replacement) molded octal; plain type (to be used in place of 9A6790 when mounting lugs on chassis break off).....	.20
21	34B77212	Scale, dial: plastic .....doz	1.00				
22	3S7155	Screw, steel: 6-32 x 3/16 slotted hex head machine screw; cadmium plated (hold dial scale mtg bracket to cabinet) .....per/c	.50	31	9A6792	Socket, tube: molded octal; with center shield (for I.F. amp) .....doz	.15
23	3S2294	Screw, steel: 6-32 x 1/2 plain hex head locking type machine screw; cadmium plated (gang mtg) .....doz	.15		9A70165	Socket, tube: (replacement) molded octal; with center shield (to be used in place of 9A6792 when mounting lugs on chassis break off) .....doz	.35
24	3S7205	Screw, steel: 8-32 x 1/4 slotted hex head locking type machine screw; cadmium plated (speaker mtg) .....doz	.15	32	41A14244	Spring, tension coil (drive cord tension) doz	.55
25	3S8117	Screw, steel: #8 x 1" PKZ slotted hex washer head sheet metal screw; antique copper finish (chassis mtg) .....doz	.20	33	35B77092	Strip, background .....doz	.05
26	3S3383	Screw, steel: #8 x 2" PKZ slotted hex head sheet metal screw, cadmium plated (loop mtg) .....doz	.20	34	31K15026	Strip, terminal: 2 insulated lugs, #2 mtg (on loop antenna panel) .....doz	.05
27	47A77087	Shaft, tuning .....doz	.20	35	32A20575	Washer, paper: 3/8 x .171 x .062 thick (used between chassis mtg screws and plastic cabinet to prevent cracking cabinet) .....per/c	.50
28	1A71049	Shield and Iron Core Sleeve Assembly (for T-1 & T-2) .....doz	.30	36	4K19943	Washer, paper: 11/16 x 17/64 x 1/32 thick (used under control knobs) .....per/c	.50
				37	57A77084	Dowel, back mounting: wood .....doz	.10

Prices Subject To Change Without Notice